Patent Application Number: 10/044,009

In the Claims

1. (Twice Amended) A metallization stack in an integrated MEMS device, the metallization stack comprising:

a substrate having an electrically conductive structure;

a field oxide, having a contact hole therein, formed over said substrate;

a silicide layer formed in said contact hole of said field oxide ~~on a semiconductor substrate of the integrated MEMS device~~;

a titanium-tungsten layer, formed directly on said silicide layer, to operatively contact ~~an~~ said electrically conductive structure in said substrate ~~the semiconductor substrate of the integrated MEMS device;~~ and

a platinum layer formed over said titanium-tungsten layer;

said silicide layer, said titanium-tungsten layer, and said platinum layer, together, forming an electrical connection to said electrically conductive structure.

2. (Previously Amended) The metallization stack of claim 1, wherein said electrically conductive structure is an active silicon element.

3. (Twice Amended) The metallization stack of claim 2, wherein ~~the semiconductor substrate has an insulating film formed thereon, the insulating film has a contact hole formed therein, the~~ said contact hole exposes a portion of ~~the~~ a surface of ~~the semiconductor~~ said substrate at a bottom of ~~the~~ said contact hole and said silicide layer is formed only on the exposed portion of the surface of said ~~the semiconductor~~ substrate.

4. (Amended) The metallization stack of claim 3, wherein ~~the~~ said platinum layer is a portion of a platinum wiring formed on ~~the insulating film~~ said field oxide.

5. (Amended) The metallization stack of claim 1, wherein the integrated MEMS device is

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an optical MEMS.

6. (Amended) The metallization stack of claim 1, wherein the integrated MEMS device is a Bio-MEMS device.

7. (Amended) The metallization stack of claim 6, wherein ~~the~~ said platinum layer forms a corrosive resistant electrode.

8. (Twice Amended) The metallization stack of claim 7, wherein ~~the~~ said electrically conductive structure is an interconnect of the Bio-MEMS device.

Claims 9-22 (Canceled)

23. (Twice Amended) The metallization stack of claim 1, wherein ~~the semiconductor substrate has an insulating film formed thereon; the insulating film has a contact hole formed therein, the~~ said contact hole exposes a portion of ~~the~~ a surface of ~~the semiconductor~~ said substrate at a bottom of ~~the~~ said contact hole and said silicide layer is formed only on the exposed portion of the surface of ~~the semiconductor~~ said substrate, said platinum layer being a portion of a platinum wire formed on ~~the insulating film~~ said field oxide, said platinum layer portion of the platinum wire being formed on said titanium-tungsten layer.

24. (Twice Amended) The metallization stack of claim 23, wherein the integrated MEMS device is an optical MEMS.

25. (Canceled)

26. (Canceled)

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30. (Previously Added) The metallization stack of claim 1, wherein said silicide layer is a platinum silicide layer.

31. (Previously Added) The metallization stack of claim 23, wherein said silicide layer is a platinum silicide layer.

32. (New) A metallization stack in an integrated MEMS device, the metallization stack comprising:

a substrate having an electrically conductive structure;

a field oxide formed over said substrate;

a silicide layer formed on said field oxide;

a titanium-tungsten layer, formed directly on said silicide layer, to operatively contact said electrically conductive structure in said substrate; and

a platinum layer formed over said titanium-tungsten layer.

33. (New) The metallization stack of claim 32, wherein said electrically conductive structure is an active silicon element.

34. (New) The metallization stack of claim 32, wherein said platinum layer is a portion of a platinum wiring formed on said field oxide.

35. (New) The metallization stack of claim 32, wherein the integrated MEMS device is an optical MEMS.

36. (New) The metallization stack of claim 32, wherein the integrated MEMS device is a Bio-MEMS device.

37. (New) The metallization stack of claim 36, wherein said platinum layer forms a

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corrosive resistant electrode.

38. (New) The metallization stack of claim 37, wherein said electrically conductive structure is an interconnect of the Bio-MEMS device.

39. (New) The metallization stack of claim 32, wherein said silicide layer is a platinum silicide layer.

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